

## Purchasing Receipts

Plex 11/1/2018 4:51 PM d'art. Tollis, Andrew



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER PO041320

<b>Supplier:</b>	MES002-VC Metaux Solutions 2625 boul Jacques-Cartier Est Longueuil QC J4N 1L7 Canada Phone: 800 558 8858 Fax: 514 633 8044	<b>PO No:</b>	PO041320
		<b>PO Date:</b>	10/11/18
		<b>Due Date:</b>	10/29/18
		<b>Purchase Order Revision:</b>	
		<b>Revision Date:</b>	
		<b>Ship-To Contact:</b>	Lavoie, Chantal Phone: clavoie@dartaero.com
<b>Ship To:</b>	1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200	<b>Via:</b>	Ground
		<b>Pymt Terms:</b>	Net 60
		<b>Freight Terms:</b>	
		<b>Special Comments:</b>	bid 29359

E-MAILED

OCT 11 2018

## Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		M17-4-H900-R2.250		17-4 SS Round Bar 2.250 Dia. : MATERIAL: 17-4 PH CONDITION H900  MATERIAL: 17-4 PH / S I7400 / TYPE 630 SS ROUND BAR GRAIN MUST BE ALONG LENGTH OF BAR MINIMUM YIELD STRENGTH PER TABLE MINIMUM ULTIMATE STRENGTH PER TABLE SPECIFICATION: AMS 5643 OR ASTM A564  H900 MIN. YIELD TENSILE 170 KSI / MIN. ULTIMATE TENSILE 190 KSI	Firmed	-	10/29/18	12 ft	0 ft	12 ft	\$138.35/ft	\$1,660.20

Grand Total: \$1,660.20

CL  
CH



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Canada

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## PURCHASE ORDER PO041320

### Order Notes

- Procurement Quality Clauses
- A005 right of entry
- A012 chemical and physical test report
- A016 personnel qualification
- A017 raw material identification (as applicable)
- A026 certification of material conformance
- A041 quality management system
- A042 dart notification by supplier
- A043 retention of quality documents
- A048 counterfeit parts avoidance, detection, mitigation and disposition program
- A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 10/11/18 11:30 AM dart.lavoie.chantal

Bid

03/10/2018

29359

METAUX SOLUTIONS INC  
 2625 BOUL JACQUES CARTIER EST  
 LONGUEUIL, QUEBEC  
 J4N 1L7      Tel. : 450 641-3330

*Sales Rep.* : JEROME PRIMEAU  
*Reference* : chantal  
*Expiration Date* : 01/01/2019

*Customer:* 6323336

DART AEROSPACE LTD  
 1270, ABERDEEN STREET  
 HAWKESBURY, ONTARIO  
 K6A 1K7

*Ship To :*

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Price	Total	Tx
MR31441H	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N				
MR341H	4140 HTSR ROU 12.250 DIA 1 x 72" ht; 4140 HTSR ROU 3.000 DIA 1 x 48"	6	51.30	307.80	A
MR31441H	4140 HTSR ROU 3.250 DIA 1 x 48"	4	61.50	246.00	A
MR541H	4140 HTSR ROU 5.000 DIA 1 x 48" ht;	4	102.25	409.00	A
SR214174	STAIN ROND 2.250" X 17-4-PH cond. h900 1 x 12' r/l ht; 17-4PH ROU 1.500 DIA cond.	12	138.35	1 660.20	A
SR112174	1 x 12' r/l ht; 304 FLA 500 X 2.500 1 x 12' r/l	12	62.75	753.00	A
ASQ114	ht; ALU SQU 1.250 6061-T6 1 x 12'	12	29.90	358.80	A
AF112	ht; ALU FLA 1.000 X 12.00 6061-T6	12	8.75	105.00	A

\*\*\* Continued on Next Page \*\*\*

Bid 03/10/2018 29359

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1270, ABERDEEN STREET  
HAWKESBURY, ONTARIO  
K6A 1K7

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Price	Total	Tx
	1 x 12'				
	ht;				
AP3875	ALU PLATE .375" 7075-T6 4 x 6.00" x 72.00" offer 72.00" lg cut in plate ht:	4	297.00	1 188.00	A
	10/12 jours 17-4 2.25" dia. le reste 5/7 jours				

A) Regist :	COPY	Subtotal	6 558.60
		HST :	852.62
		Total :	7 411.22

Shipping Order      29/10/2018

METAUX SOLUTIONS INC  
2625 BOUL JACQUES CARTIER EST  
LONGUEUIL, QUEBEC  
J4N 1L7      Tel. : 450 641-3330

*Order* : 138814  
*Reference* : 41320  
*Ship* : PICK UP / PICK UP

*Customer* : 6323336

*Ship To*

DART AEROSPACE LTD  
1270, ABERDEEN STREET  
HAWKESBURY, ONTARIO  
K6A 1K7

Same

*Tel.* : 1 613 632-3336

<i>Item No.</i>	<i>Description</i>	<i>Qty</i>	<i>Qty. Delive<i>r</i></i>	<i>B/O Qty</i>
SR214174	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N STAIN ROND 2.250" X 17-4 PH COND H900 1 X 12.33' R/L HT 9SJ0048-G60	12.33	12.33	Ø

LIVRE

JP

Shipping : \_\_\_\_\_  
Package No : \_\_\_\_\_  
Merchandise Received : \_\_\_\_\_

Ref. : \_\_\_\_\_



# GLORIA MATERIAL TECHNOLOGY CORP.

## INSPECTION CERTIFICATE

Messrs:  
 Order No.:  
 File No.:  
 Grade: 17-4 ANN  
 Size: 2-1/4"  
 Heat-Lot No.: 9SJ0048-G60  
 Condition: HR-Solution Annealed-Ground

P.O.No.:  
 Date: 06/19/2018  
 Weight: 1216KG 2680.82LB  
 P'cs: 16

Chemical Composition (wt%)							
	C	Si	Mn	P	S	Ni	Cr
Min.						3.00	15.00
Max.	0.07	1.00	1.00	0.040	0.030	5.00	17.50
Result	0.01	0.37	0.58	0.019	0.001	4.73	15.31
	Mo	Cu	Nb+Ta	Nb			
Min.		3.00	0.15	5C			
Max.	0.50	5.00	0.45	0.45			
Result	0.16	3.34	0.25	0.24			

### Mechanical Properties Spec.

Spec. Min.	Hardness	Grain Size		Delta-Ferrite
		ASTM E112	AMS 2315	
	1/2R	T	L	
Spec. Min.	363HBW			
Spec. Max.		5%		
Result	301HBW	7	0.3%	

### H900 Hardness (Ave)

	1/2R L
Spec. Min.	40HRC
Spec. Max.	47HRC
Result	44HRC

### Macro Etching

	MACRO ETCH	MACRO ETCH
	ASTM E340	ASTM E340
Spec.	B	T
Result	OK	OK



Heat Treating  
Material Testing Laboratory  
Nondestructive Testing

Mars Wang
Quality Manager
Mars Wang

Page 1 of 3

Our quality and environment management systems have been certified by AS9100, ISO9001 QMS, ISO14001 EMS, OHSAS18001 OH&S, and NADCAP.  
 We hereby certify that the material described herein has been manufactured and tested with satisfactory results in accordance with  
 the requirement of the above material specification. Inspection Certificate comply with EN 10204 3.1.

台灣台南市新營區新中路35號/NO.35, HSIN CHUNG RD., HSIN YING, TAINAN, TAIWAN  
 TEL: 886-6-6520031 / FAX: 886-6-6230877  
<http://www.gmtc.com.tw>



**GLORIA MATERIAL TECHNOLOGY CORP.**  
**INSPECTION CERTIFICATE**



Messrs:  
Order No.:  
File No.:  
Grade: 17-4 ANN  
Size: 2-1/4"  
Heat-Lot No.: 9SJ0048-G60  
Condition: HR-Solution Annealed-Ground

P.O.No.:  
Date: 06/19/2018  
Weight: 1216KG 2680.82LB  
P'cs: 16

**Tensile Test**

	Elongation(A)	Tensile Strength(Rm)	Yield Strength(0.2% Rp)	Reduction of Area(Z)
Unit	1/2R L (Ave)	1/2R L (Ave)	1/2R L (Ave)	1/2R L (Ave)
Min.	%	KSI	KSI	%
Max.	10	190	170	40
Result	14	201	180	47

Non-Metallic Inclusions :AMS 2303  
Severity Frequency

Seat	Max.
Result	0 0

REDUCTION RATIO: Min 4.0:1

**Specification:**

1. ASTM A564XA564M-13.
2. ASME SA564(2013).
3. AMS 5643U.
4. ASTM A484/A484M-16.
5. AMS 2303F.
6. AMS 2315G.
7. EN 10204 3.1.
8. FIDELITY 17-4PH ROUND BAR REVISION 03/15/13.

**Remark:**

1. MANUFACTURING PROCESS: EAF+LHF+VOD, FORGED OR HOT ROLLED.
2. SOLUTION TREATMENT: 1900 +/- 25 DEGREE F FOR 30 MIN/INCH (MINIMUM OF 1/2 HOUR), FAST COOLING TO BELOW 90 DEGREE F.
3. MECHANICAL PROPERTIES TESTED AS PER H900 CONDITION.
4. MATERIAL IS FREE FROM KNOWN CONTACT WITH MERCURY AND RADIUM.



Heat Treatment  
Material Testing Laboratory  
Nondestructive Testing

Mars Wang
Quality Manager

Page 2 of 3

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# GLORIA MATERIAL TECHNOLOGY CORP. INSPECTION CERTIFICATE

Messrs:  
Order No.:  
File No.:  
Grade 17-4 ANN  
Size: 2-1/4"  
Heat-Lot No.: 9SJ0048-G60  
Condition: HR-Solution Annealed-Ground

P.O.No.:  
Date: 06/19/2018  
Weight: 1216KG 2680.82LB  
P'cs: 16

---

- 5. MATERIAL IS FREE FROM WELDS OR WELDING REPAIRS.
- 6. MATERIAL IS FREE FROM RESIDUAL RADIOACTIVITY.
- 7. NO PRODUCT THAT CONTAIN OR WERE MADE WITH ODC'S.
- 8. ULTRASONIC TEST IS ACCEPTABLE PER ASTM A388.
- 9. THE MATERIAL IS THE SAME AS AISI 630.
- 10. COUNTRY OF ORIGIN: TAIWAN.



**Nadcap**  
Accredited  
Metal Testing  
Material Testing Laboratory  
Nondestructive Testing

Mars Wang
Quality Manager

Page 3 of 3

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TEL: 886-6-6520031/FAX: 886-6-6230877  
<http://www.gmtc.com.tw>

# METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

## Certificat de Conformité

Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
331265	1

CLIENT / customer 780

METAUX SOLUTIONS

2625 BOUL. JACQUES-CARTIER EST

LONGUEUIL QC J4B 6G6

IVRÉ À / shipped to:

METAUX SOLUTIONS

2625 BOUL. JACQUES-CARTIER EST

LONGUEUIL QC J4B 6G6

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
45655	N/A	17-4PH		

### SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

AGE HARDEN

CONDITION H 900

EXIGENCE / requirement	SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	40 - 47 HRC	1 46 - 47 HRC (907)

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
1	166	PIECES (1) BARRE 144.5" X 2.25"  1 NIL

2/11/18.

### COMMENTAIRES / comments

APPROUVÉ par / Approved by:



DATE: 2018-10-26

APPROUVÉ

# SPECIFICATION CONTROL DRAWING

1	2	3	4	5	6	7	8	9	D																																				
C	C	B	A	B	C	D	C	B	D																																				
<b>PURCHASE MATERIAL: 17-4 PH / S17400 / TYPE 630 SS ROUND BAR GRAIN MUST BE ALONG LENGTH OF BAR MINIMUM YIELD STRENGTH PER TABLE MINIMUM ULTIMATE STRENGTH PER TABLE</b>																																													
<b>SPECIFICATION: PART NUMBER:</b> M17-4- <u>HHHHH-R X.XXX   COND   O.D.</u> WHERE: HHHHH SPECIFIES THE MATERIAL CONDITION (PER TABLE BELOW) X.XXX = DIAMETER (IN INCHES)																																													
<b>MATERIAL CONDITION TABLE:</b>																																													
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>CODE</th> <th>CONDITION</th> <th>MIN YIELD STRENGTH (KSI)</th> <th>MIN ULTIMATE TENSILE STRENGTH (KSI)</th> </tr> </thead> <tbody> <tr> <td>(OMITTED)</td> <td>NONE SPECIFIED (CONDITION A NOT ACCEPTABLE)</td> <td>100</td> <td>150</td> </tr> <tr> <td>H900</td> <td>H900</td> <td>170</td> <td>190</td> </tr> <tr> <td>H925</td> <td>H925</td> <td>155</td> <td>170</td> </tr> <tr> <td>H1025</td> <td>H1025</td> <td>145</td> <td>155</td> </tr> <tr> <td>H1075</td> <td>H1075</td> <td>125</td> <td>145</td> </tr> <tr> <td>H1100</td> <td>H1100</td> <td>115</td> <td>140</td> </tr> <tr> <td>H1150</td> <td>H1150</td> <td>105</td> <td>135</td> </tr> <tr> <td>COND A</td> <td>CONDITION A, (SOLUTION TREATED)</td> <td></td> <td></td> </tr> </tbody> </table>										CODE	CONDITION	MIN YIELD STRENGTH (KSI)	MIN ULTIMATE TENSILE STRENGTH (KSI)	(OMITTED)	NONE SPECIFIED (CONDITION A NOT ACCEPTABLE)	100	150	H900	H900	170	190	H925	H925	155	170	H1025	H1025	145	155	H1075	H1075	125	145	H1100	H1100	115	140	H1150	H1150	105	135	COND A	CONDITION A, (SOLUTION TREATED)		
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<b>NOTES: MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR TENSION OR SHEAR APPLICATIONS IN COLD WEATHER CONDITIONS</b>  <b>MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR APPLICATIONS WHERE STRESS CORROSION CRACKING IS POSSIBLE</b>  <b>CONDITION A NOT TO BE USED IN DESIGN FOR FINAL PRODUCT AND SHOULD ALWAYS BE HEAT TREATED</b>																																													
<b>EXAMPLES:</b>																																													
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<b>APPROVED</b>  <b>RELEASED</b>  <b>DATE</b> 17.09.14																																													
<b>DART AEROSPACE LTD</b> <small>HAWKESBURY, ONTARIO, CANADA</small> <b>REV. C</b> <small>SHEET 1 OF 1</small> <small>SCALE</small> <small>NTS</small>																																													
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## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M17-4-4900-R2.50  
 DATE: 18/11/01

PO / BATCH NO.: P0041370/S124008

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 12.244  
 QUANTITY INSPECTED: 12.346  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.250"  
 THICKNESS RECEIVED: 2.250"  
 SHEET SIZE ORDERED: -  
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>N</u>	
CORRECT FINISH	Y <u>N</u>	
CORROSION	Y <u>N</u>	
CORRECT GRAIN DIRECTION	Y <u>N</u>	
CORRECT MATERIAL PER M-DRAWING	Y <u>N</u>	ASTM A514
CORRECT THICKNESS	Y <u>N</u>	
PHOTO REQUIRED	Y <u>N</u>	
CORRECT REF # TO LINK CERT	Y <u>N</u>	JIT: 95 J0048-660
CORRECT MATERIAL IDENTIFICATION	Y <u>N</u>	
CORRECT M# ON THE MATERIAL	Y <u>N</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>N</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>N</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AJ</u>	SIGNED OFF BY: _____
DATE: <u>18/11/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in